

Department of Environmental Quality

Air Advisory Council

November 17, 2017

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DEQ Mission

The Michigan Department of Environmental Quality promotes wise management of Michigan's air, land, and water resources to support a sustainable environment, healthy communities, and vibrant economy.



Mission Statement

The Michigan Department of Environmental Quality promotes wise management of Michigan's air, land, and water resources to support a sustainable environment, healthy communities, and vibrant economy.

Guiding Principles

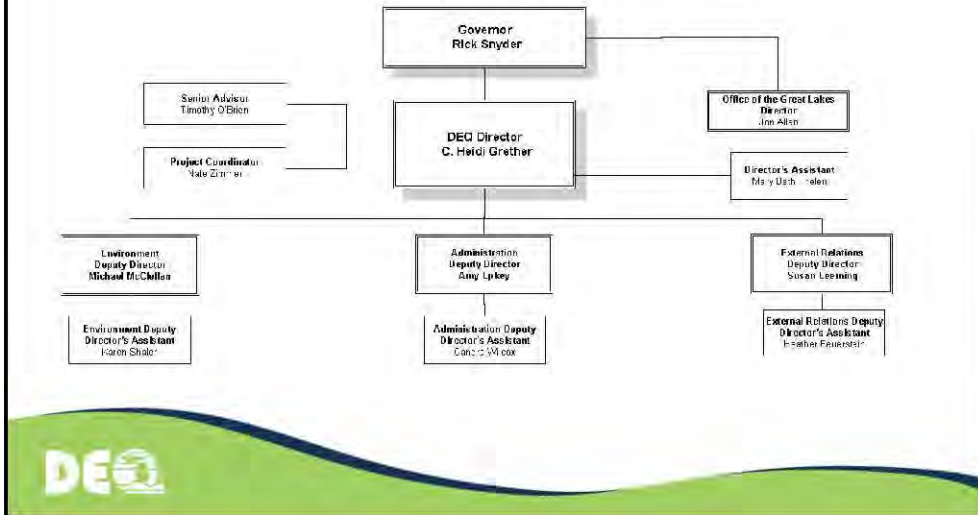
Leaders in environmental stewardship
Partners in economic development
Providers of excellent customer service

Vision

Our vision is to reduce public health and environmental risks, assist Michigan communities with addressing infrastructure needs, and build external partnerships to address Michigan's environmental issues through the authorities granted to us by the Michigan Legislature and Constitution.

Organizational Structure

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ORGANIZATIONAL STRUCTURE
September 11, 2017

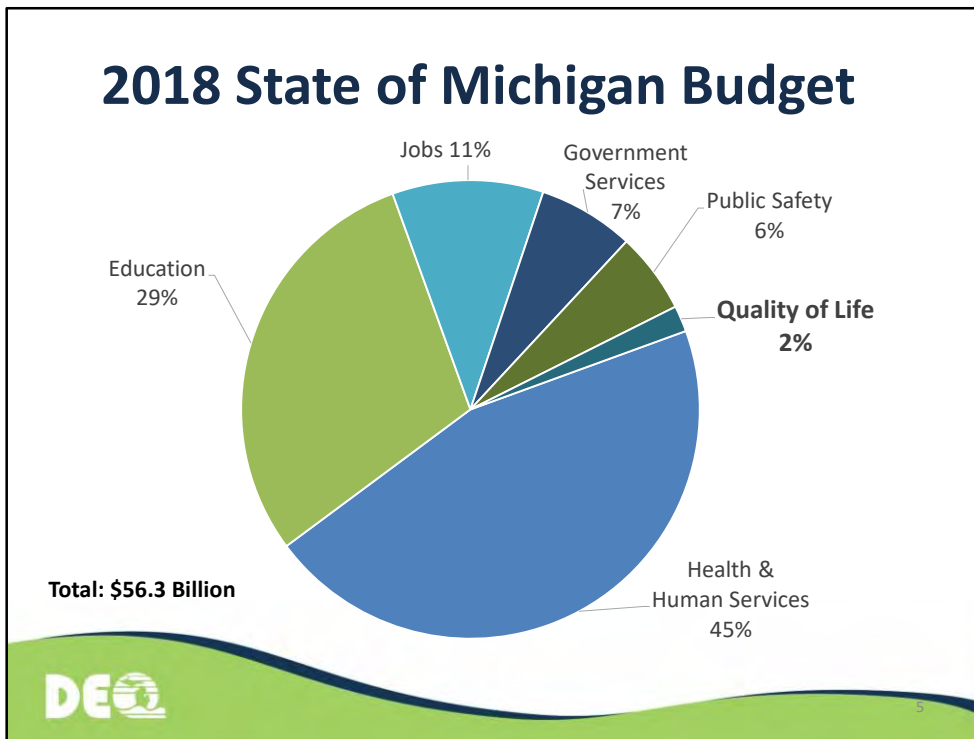


DEQ Priorities

- Protect public health & environment
- Assist Michigan communities with addressing infrastructure needs
- Build external partnerships to address Michigan's environmental issues

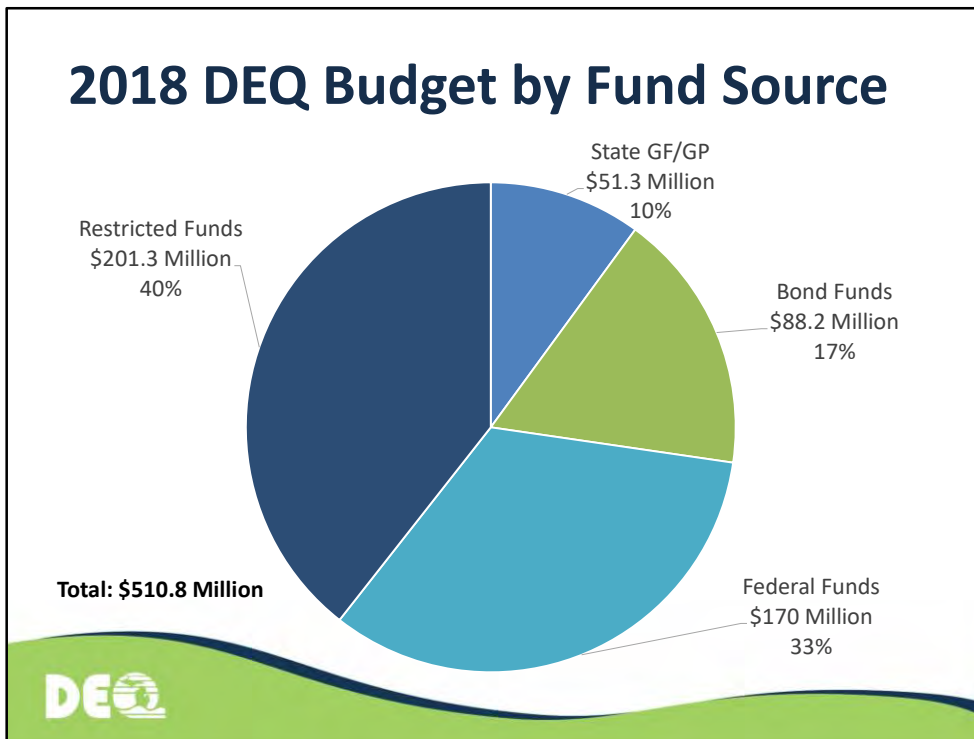


- Protecting Public Health and the Environment.
 - Fundamental to why we exist as a Department.
 - Taxpayers expect this of our staff and the programs we administer.
- Working to assist communities with new and innovative ways to address their infrastructure needs
- Strengthen our external partnerships to collaboratively solve Michigan's environmental issues



- Context: DEQ compared to state's budget of \$56.3 billion
- For environmental protection- Quality of Life agencies- is the smallest portion of the budget at 2% or \$1 billion
- We are tiny piece of the pie with a big impact
- Quality of Life is comprised of the following:
 - Agriculture & Rural Development – Total: \$104.9 million; General Fund: \$56.6 million
 - Natural Resources – Total: \$416.4 million; General Fund: \$64 million
 - Environmental Quality – Total: \$510.8 million; General Fund: \$51.3 million

NOTE: DEQ is lowest general fund of three Quality of Life Departments



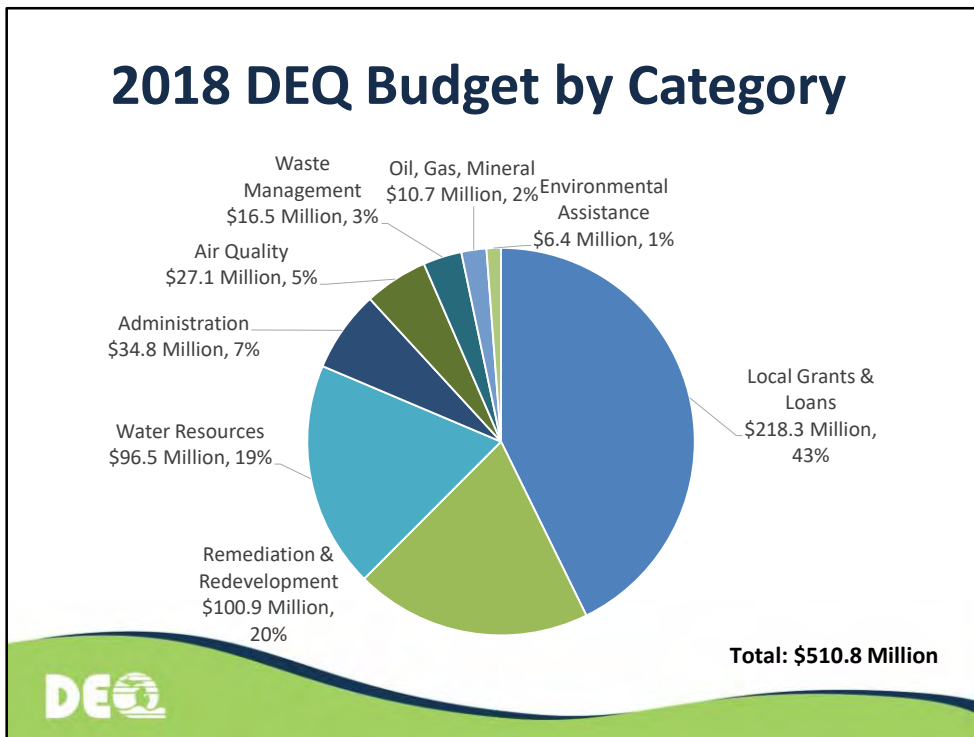
➤ DEQ specific budget

- DEQ's total budget is over \$500 million.
- DEQ's funding is supported by the following sources
 - 40% fees
 - 33% federal funds
 - 17% bonds
 - 10% general fund

➤ Mostly rely on fees

➤ Watching fed funds closely

➤ Bonds are nearly depleted



- So, how does the DEQ spend our budget?
- Almost half (\$218 million) passes through to local communities
 - grants and loans to support local environmental protection activities.
 - Most grants are water infrastructure
 - Recycling and brownfield redevelopment

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Background:

- 19% is budgeted for water resources for the protection and monitoring of Michigan's waters for swimming, fishing, fish consumption, and for a healthy aquatic ecosystem.
 - Office of the Great Lakes: \$2 million, 2.2% of the category
 - Great Lakes Restoration Initiative (federal funding): \$15.1 million, 15.6% of the category
 - Drinking Water & Municipal Assistance Division: \$23.9 million, 24.7% of the category
 - Water Resources Division: \$55.5 million, 57.5% of the category

Clean Environment Initiative

Top DEQ Budget Priority

- Environmental cleanup and brownfield redevelopment
- Waste management and recycling
- Emerging contaminants (PFAS)
- Water quality
- State and local parks



Address risk at 3,000 sites



Double Michigan's Recycling Rate



- The Clean Michigan Initiative Bond of 1998 was a \$675 million voter approved bond that supported the
 - cleanup of contaminated sites across the state,
 - brownfield redevelopment,
 - water quality monitoring efforts, and
 - state and local park improvements.
- The funds are nearly entirely depleted.
- Still there are 3,000 known contaminated sites with no funding to address the issues.
- The DEQ is committed to working with stakeholders, the Governor's Office, and legislature to identify a long-term funding solution.
- We look forward to any suggestions stakeholders have on how to assure future environmental issues can be addressed.
- Since 1998 the DEQ has relied on \$660 million from the Environmental Protection Bond and \$675 million Clean Michigan Initiative Bond to support cleanup of sites.

Other Budget Priorities

- Modernize information technology systems
- Support oil and gas program
- Provide water infrastructure financing to local communities



- In addition to the Clean Environment Initiative, DEQ has three other budget priorities
 - Information Technology
 - Oil and Gas Program
 - Infrastructure Financing Programs
- The department recently underwent a prioritization of IT needs.
- DEQ is looking at updating three systems over the next couple of years related to drinking water, air, and water resources.
- Low oil and gas prices have resulted in significant declines in revenue for our oil and gas program.
- Funding options are being evaluated to continue to support the oil and gas program responsible for overseeing 20,000 active wells.
- Addressing local water infrastructure through flexible financing programs is also a priority for the department.

PFAS

****Per- and Polyfluoroalkyl Substances****

- US EPA designation - national emerging contaminant
- PFAS - suite of chemicals with thousands of applications
- Used in industrial, food, and textile industries
- Characteristics
 - Incredibly stable
 - Break down very slowly
 - Highly soluble
 - Easily transferred through soil to groundwater



Statewide Concerns

- PFAS contamination identified in several locations in Michigan
- Currently – 14 locations, 28 sites
- Sources include:
 - Current and former military installations
 - Tanneries
 - Plating operations
 - Legal and illegal disposal sites



Finding significant PFAS migration

Water wells – test wells, residential, municipal, livestock

Confirmed PFAS Locations/# sites

Alpena/2
Ann Arbor/1
Escanaba/1
Flint/1
Grayling/3
Gwinn/1
Lansing/2
Lapeer/2
Mt. Clemens/2
Mt. Pleasant/1
Oscoda/7
Plainfield Township/2
Rockford/2
Tawas/1

14 location
28 sites



State Response

- Governor Snyder's Executive Directive 2017-4
 - Michigan PFAS Action Response Team
 - Comprehensive, cohesive and timely response
 - Team lead – Carol Issacs
 - Team advisor – Dr. David Savitz, Brown University
 - Team composition:

DEQ

DHHS

DMVA

MDARD

Other agencies as needed



Carol Issacs

- Significant state government experience, both legislative and executive branches
- Most recently Chief Deputy Attorney General
- Health care experience, senior critical care nurse and manager
- Lifetime Achievement Award – National Association of Attorneys General, 2016

Dr. David Savitz, PhD

- Professor of Epidemiology, Brown University's School of Public Health
- Several positions within academic & professional societies, boards, committees
- Recipient numerous awards & honors
- Most recently, National Cancer Institute's Distinguished Lecturer Award in Occupational and Environmental Epidemiology, 2011

Challenges

- Funding
- Test analysis timeframe
- Lack of public health and environmental standards
- Unsettled science



Funding

- Funding for these efforts was not included in the FY18 budget – emerging issue.
- DEQ is providing testing of private residential drinking water wells to ensure that no one is exposed to unsafe levels in drinking water.
- Cost is \$500/sample. \$1,000 for rush turn around. Normal turn around time is running 4-6 weeks.
- DEQ is also conducting investigations using monitoring wells and vertical aquifer sampling to define plumes and characterize the extent of contamination. Very expensive.
- Requires dedicated staff time to develop plan, oversee contracts, analyze results, engage with local partners, ensure communication with residents, local public health, businesses, schools, etc.

Testing analysis timeframe

- Approximately 12 private vendors do PFAS testing
- All out of state

Standards

- EPA lifetime health advisory level – 70 ppt PFOA/PFOS singly or combined; non-regulatory recommendation and not enforceable.
- No state or federal cleanup level or Safe Drinking Water Level.
- Proposed state cleanup level for PFOA and PFOS at 70 ppt, Part 201 rules package.

The proposed rule package, which includes cleanup criteria for 305 hazardous substances, including PFOA and PFOS, is in the public comment phase of the Rule process. The package has been under development with stakeholders since 2015.

Unsettled science

- Some things we do know,
 - Exposure pathway is ingestion only, not dermal
 - Half-life is 2 to 9 years in the human body
 - Activated carbon filters will work up to certain concentration levels,
 - Extremely high temperatures can break them down
- There is not consensus on
 - Rate of dispersal in the environment
 - ppt level at which filters should be used for consumptive water
 - Human health impacts, animal impacts (livestock, pets, wild, fish)
 - Bioaccumulation of long chain PFAS in animals and what that means to those consuming

Next Steps

- Secure additional financial support
- Stand up state laboratory capabilities
- Work with USEPA, pass state cleanup criteria standards
- PFAS technical team
- MPART
- Website: www.michigan.gov/pfasresponse



Funding

- Total state supplemental budget request for FY 2018 - \$40M
- DEQ request - \$28.8M, 15 FTEs
- Response activities - residential well testing, surface water sampling, fish collection & testing, some remedial investigation
- DEQ Lab – 3 FTEs and equipment to analyze environmental samples

Standards

- Working with USEPA Region V, Environmental Council of States (state environmental agency directors/commissioners) for shared learnings, best practices, etc.
- Working to finalize Part 201 rules update, including standards for PFOA and PFOS

PFAS technical team

- Research and review known technical information
- Help provide answers to pressing health and scientific questions
- Identify and recommend courses of action

MPART

- Direct work of individual departments to ensure coordination, alignment and consistency
 - 10 state departments, in coordination with local and federal officials across Michigan, are working together to ensure that the public health and safety of

residents is protected while ensuring our environmental heritage is secure for generations of Michiganders to come.

- Receive regular updates on the status of site activities and legal actions
- Identify knowledge and resource gaps
- Ensure transparency regarding general and site specific information via website, community meetings, etc.
 - Website: www.michigan.gov/pfasresponse
- Provide report to the Governor and Cabinet on PFAS status and progress